

42390P10393

2005 JUN 22 AM 3:12

Amendment to Claims

1-5(Canceled).

6(Currently amended). A device comprising:

an Analog-to-Digital Converter (ADC) to convert data having a first over-the-air interface standard as received in a receiver path;

a Digital-to-Analog Converter (DAC) to convert data having a second over-the-air interface standard to be transmitted in a transmitter path;

a cancellation circuit having a first input ~~coupled~~ directly connected to an input of the DAC and a second input coupled to an output of the ADC, wherein the cancellation circuit injects an out-of-phase signal into the receiver path to cancel at least a portion of interference from the transmitter path.

7(Original). The device of claim 6 further comprising a subtractor circuit having a first input coupled to an input of the receiver path and a second input coupled to an output of the cancellation circuit.

8(Once Amended). The device of claim 7 further comprising a first antenna coupled to an output of the DAC to provide signals for Bluetooth™ and IEEE 802.11b.

9(Once Amended). The device of claim 8 further comprising a second antenna coupled to an input of the ADC to receive Bluetooth™ and IEEE 802.11b signals.

10(Original). The device of claim 9 wherein the first antenna is placed orthogonal to the second antenna.

11(Original). The device of claim 10 wherein the subtractor circuit has the first input coupled to the second antenna.

42390P10393

12(Currently amended). A system having a Digital-to-Analog Converter (DAC) and an Analog-to-Digital Converter (ADC) comprising:

a transmit path to receive transmitter digital data to convert to a transmitter analog signal having a first over-the-air interface standard;

a receive path to receive a receiver analog signal having a second over-the-air interface standard to convert to receiver digital data; and

a cancellation circuit having inputs directly connected to the DAC and the ADC to respectively receive the transmitter digital data and the receiver digital data and generate an out-of-phase signal that is combined with the receiver analog signal to cancel at least a portion of interference from the transmitter path in the receive path.

13(Once Amended). The system of claim 12 further comprising a subtractor circuit having a first input coupled to an output of the cancellation circuit and a second input coupled to receive the receiver analog signal, and an output to provide a signal in the receive path having mitigated interference.

14 (Withdrawn claim). The system of claim 12 wherein the transmit path further includes a Digital-to-Analog Converter (DAC) having an input coupled to receive the transmitter digital data and having an output to provide the transmitter analog signal.

15(Withdrawn claim). The system of claim 12 wherein the receive path further includes an Analog-to-Digital Converter (ADC) having an input coupled to receive the receiver analog signal and having an output to provide the receiver digital data.

16(Once Amended). The system of claim 12 wherein the receive path further includes:

a first antenna coupled to an output of the DAC to provide Bluetooth™ and IEEE 802.11b signals; and

a second antenna coupled to an input of the ADC to receive signals for Bluetooth™ and IEEE 802.11b.

42390P10393

17 (Original). The system of claim 16 wherein the first antenna is placed orthogonal to the second antenna.

18(Currently amended). A method comprising:
converting in a Digital-to-Analog Converter (DAC) a first digital value to an analog signal in a transmitter;
converting in an Analog-to-Digital Converter (ADC) a signal received by a receiver that contains a portion of the analog signal as interference to a second digital value, where the analog signal in the transmitter and the signal received by the receiver have differing over-the-air interface standards; and
processing the first ~~and second digital values~~ digital value from an input of the DAC and the second digital value from an output of the ADC to generate an out-of-phase signal that is combined with the signal received by the receiver to mitigate the interference in the signal converted by the receiver.

19(Original). The method of claim 18, wherein processing the first and second digital values further comprises generating a signal that is out-of-phase to the portion of the analog signal contained in the signal received by the receiver.

20(Original). The method of claim 19 further comprising subtracting the signal that is out-of-phase from the signal received by the receiver.

21(Original). The method of claim 20 further comprising receiving the signal in the receiver orthogonal to the analog signal in the transmitter.